

This is the guideline for hypercalcaemia in the absence of malignancy as a known cause, for Hypercalcaemia of Malignancy please use the trust guideline, Trust Ref B23/2015

Clinical features of hypercalcaemia usually apparent when calcium level > 3.5 mmol/L

Clinical manifestations of hypercalcemia

Renal
Polyuria
Polydipsia
Nephrolithiasis
Nephrocalcinosis
Distal renal tubular acidosis
Nephrogenic diabetes insipidus
Acute and chronic renal insufficiency
Gastrointestinal
Anorexia, nausea, vomiting
Bowel hypomotility and constipation
Pancreatitis
Peptic ulcer disease
Musculoskeletal
Muscle weakness
Bone pain
Osteopenia/osteoporosis
Neurologic
Decreased concentration
Confusion
Fatigue
Stupor, coma
Cardiovascular
Shortening of the QT interval
Bradycardia
Hypertension

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Hypercalcaemia

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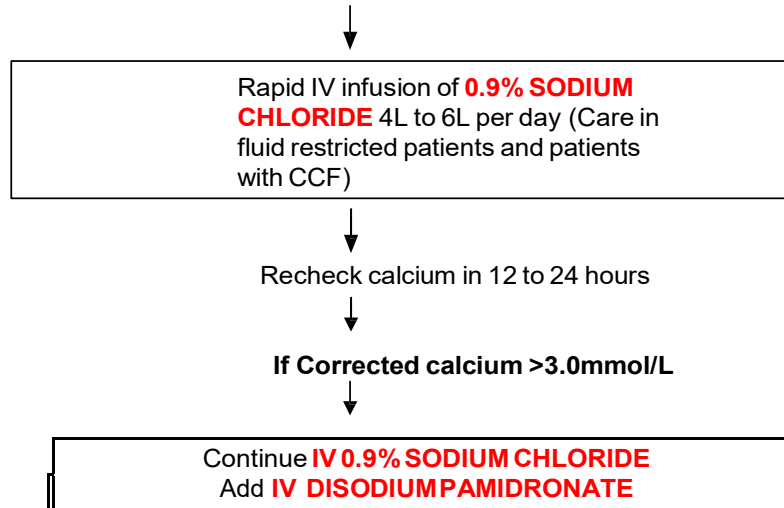
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- **Asymptomatic and mild (calcium 2.6 to 3 mmol/L) hypercalcaemia**

- Discontinue thiazide diuretics, vitamin D and calcium supplements
- Restrict dietary calcium
- Rehydrate with **IV 0.9% Sodium Chloride** if evidence of dehydration.
- Serum calcium repeat required in two weeks (please communicate this request to the GP in discharge letter)

- **Moderate or severe (calcium >3 mmol/L) or symptomatic hypercalcaemia**



IV DISODIUM PAMIDRONATE dosing

Dilute with 250 mls of 5% dextrose or N/Saline and give at a rate of 20 mg per hour.

INITIAL Calcium level (mmol/L)	Recommended TOTAL dose
3.0 to 3.5	30 to 60mg
3.5 to 4.0	60 to 90mg
> 4.0	90mg

- Recheck calcium in 3 to 5 days as effect of pamidronate will be maximal at around four days.

NB: Pamidronate may be repeated, but no sooner than a minimum of seven days, to a max dose per seven days of 90mg.

- Disodium pamidronate may be commenced earlier in patients with severe symptomatic hypercalcaemia or where aggressive fluid therapy is not appropriate.

OTHER TREATMENTS

- **ORAL PREDNISOLONE 30 - 60mg per day** (after iv sodium chloride)

Treatment of choice for hypercalcaemia secondary to *vitamin D toxicity, sarcoidosis* and *Addison's Disease*.

Do not use beyond 7 days if ineffective in lowering serum calcium.

May be used in combination with calcitonin for a slightly prolonged effect.

- **DIALYSIS**

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Transiently lowers serum calcium.

May be appropriate for patients with marked renal impairment and where other therapies are contra-indicated or prove ineffective.

REMEMBER: always establish and treat the underlying cause of hypercalcaemia – don't just treat the biochemical abnormality.

Nursing Interventions:

Four hourly observations Temperature

Pulse

BP

Respirations Oxygen saturations

More frequently if clinically indicated

Consider continuous cardiac monitoring if very hypercalcaemic

Maintain strict fluid balance chart

References:

Society for Endocrinology Endocrine Emergency Guidance: Emergency management of acute hypercalcaemia in adult patients 2016.

<https://ec.bioscientifica.com/view/journals/ec/5/5/G9.xml>

Treatment of Hypercalcaemia UpToDate 2019.

https://www.uptodate.com/contents/treatment-of-hypercalcemia?search=hypercalcemia&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2

Clinical Manifestations of Hypercalcaemia UpToDate 2019

https://www.uptodate.com/contents/clinical-manifestations-of-hypercalcemia?search=hypercalcemia&source=search_result&selectedTitle=3~150&usage_type=default&display_rank=3

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